Comparisons of Job Characteristics

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

[Compare Knowledge](#)
[Compare Skills](#)
[Compare Abilities](#)
[Compare Detailed Work Activities](#)
[Compare Tools and Technologies](#)

<<	Focus occupation element is much lower
<	Focus occupation element is lower
0	Focus occupation element is at a similar level
>	Focus occupation element is at a higher level
>>	Focus occupation element is at a much higher level

Knowledge — Similarity of Focus Occupation to Associated Occupation: 74

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

Associated Occupation's Key Knowledge Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation	
Mathematics	9.2	23.9	16.5	<<	Extensive education and/or training may be required
Engineering and Technology	5.7	22.8	11.5	<<	Extensive education and/or training may be required
English Language	11.2	21.4	18.2	<	Expanded education and/or training may be required
Education and Training	9.2	21.3	21.7	0	Current knowledge level may be sufficient
Design	5.2	19.5	7.7	<<	Extensive education and/or training may be required
Physics	4.3	18.9	4.9	<<	Extensive education and/or training may be required
Computers and Electronics	8.4	18.2	22.6	>>	Current knowledge level is likely more than sufficient
Mechanical	6.8	13.7	3.4	<<	Extensive education and/or training may be required
Telecommunications	3.9	11.2	11.7	0	Current knowledge level may be sufficient
Chemistry	4.8	10.8	2.1	<<	Extensive education and/or training may be required
Communications and Media	5.3	10.5	9.6	0	Current knowledge level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Skills — Similarity of Focus Occupation to Associated Occupation: 93

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

Associated Occupation's Key Skills Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating	Evaluation of Focus Occupation

Instructing	7.8	15.5	15.1	0	Current skill level may be sufficient
Speaking	10.8	14.8	17.4	>	Skill level is likely sufficient
Learning Strategies	7.2	11.8	13.5	>	Skill level is likely sufficient
Mathematics	6.2	11.3	8.4	<<	Extensive development of skills in this area may be required

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Abilities — Similarity of Focus Occupation to Associated Occupation: 95

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

Associated Occupation's Key Abilities Elements	Average Rating, All Occupations	Associated Occupation's Rating	Focus Occupation's Rating		Evaluation of Focus Occupation
Oral Expression	12.4	18.1	18.9	0	Current ability level may be sufficient
Written Comprehension	11.0	16.6	16.7	0	Current ability level may be sufficient
Oral Comprehension	12.5	16.3	16.5	0	Current ability level may be sufficient
Speech Clarity	10.2	14.9	17.5	>	Current ability level is likely sufficient
Written Expression	9.8	14.9	14.9	0	Current ability level may be sufficient
Originality	7.6	12.1	9.3	<<	Extensive improvement in abilities may be required
Mathematical Reasoning	6.3	11.5	9.1	<	Some improvement in abilities may be required
Number Facility	6.3	11.1	6.1	<<	Extensive improvement in abilities may be required
Memorization	5.6	8.3	7.8	0	Current ability level may be sufficient

The maximum possible rating is 25.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Activities that Both Occupations Have in Common — Similarity of Focus Occupation to Associated Occupation: 89

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

Work Activities	Exclusivity of Activity
Advise governmental or industrial personnel	28
Advise students	49
Collect academic research data	62
Compile bibliographies of specialized materials	54
Conduct research on work-related topics	44
Convert information into instructional program	38
Design classroom presentations	45
Develop course or training objectives	42
Develop instructional materials	38

Direct and coordinate scientific research or investigative studies	27
Encourage group participation	54
Evaluate student performance	46
Explain complex mathematical information	30
Maintain educational records, reports, or files	43
Make education presentations	46
Organize educational material or ideas	41
Prepare educational reports	44
Record student progress	46
Teach college level courses	54
Use computers to enter, access or retrieve educational data	46
Use oral or written communication techniques	1
Use public speaking techniques	13
Use teaching techniques	29
Write research or project grant proposals	33
Write scholarly or technical research papers	36

Not all positions in these occupations will necessarily perform all of the listed activities. The exclusivity rating is an indication of how unique the activity is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations engage in that activity.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.

Tools and Technologies that Both Occupations Have in Common	Similarity of Focus Occupation to Associated Occupation: n/a

Focus Occupation: Computer Science Teachers, Postsecondary (25-1021)
Associated Occupation: Engineering Teachers, Postsecondary (25-1032)

Tools and Technologies	Exclusivity
Tools and technology data is unavailable for one or both occupations.	

Not all positions in these occupations will necessarily use all of the listed tools and technologies. The exclusivity rating is an indication of how unique the tool or technology is amongst all occupations. The maximum rating is 100. High scores indicate that only a small number of occupations use that tool or technology.

Source: Alaska Department of Labor and Workforce Development, Research and Analysis Section analysis of O*NET (Occupation Information Network) data.